

# City of Miami



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June 13, 2016

Ms. Carlotta S. Stauffer, Director  
Office of Commission Clerk  
Florida Public Service Commission  
2540 Shumard Oak Boulevard  
Tallahassee, FL 32399-0850

RE: Docket No. 160009-EI

Dear Ms. Stauffer:

Attached please find for filing in Docket No. 160009-EI the **Direct Testimony of Eugene T. Meehan**. The following was filed through the Florida Public Service Commission's E-Filing Portal.

If you have any questions, please do not hesitate to contact us. Thank you for your attention to this matter.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Xavier E. Alban', is written over a light blue horizontal line.

Xavier E. Albán  
Assistant City Attorney

Enclosures

**CERTIFICATE OF SERVICE**

I HEREBY CERTIFY that a true copy of the foregoing has been furnished to all counsel listed on the attached Service List via e-mail, this 13<sup>th</sup> day of June, 2016.

By: 

Xavier E. Albán  
Assistant City Attorney  
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**BEFORE THE PUBLIC SERVICE COMMISSION**

**DOCKET NO. 160009-EI**

**THE CITY OF MIAMI**

**JUNE 13, 2016**

**IN RE: NUCLEAR POWER PLANT COST RECOVERY**

**FOR THE YEAR ENDING**

**DECEMBER 2017**

**TESTIMONY & EXHIBITS OF:**

**EUGENE T. MEEHAN**

1                   **BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**

2                                   **THE CITY OF MIAMI**

3                                   **DIRECT TESTIMONY OF EUGENE T. MEEHAN**

4                                   **DOCKET NO. 160009-EI**

5                                   **JUNE 13, 2016**

6  
7   **Q.    PLEASE STATE YOUR NAME, TITLE, AND BUSINESS ADDRESS.**

8    A.    My name is Eugene T. Meehan. I am an independent energy and utility consultant.  
9           My address is 7042 Powderhorn Ct., Park City, Utah, 84098. I have prepared pre-  
10         filed testimony on behalf of the City of Miami (“the City”).

11  
12   **Q.    PLEASE SUMMARIZE YOUR PROFESSIONAL QUALIFICATIONS.**

13   A.    I have over thirty five years of experience consulting with electric and gas utilities.  
14         That work has involved examination and advice on many issues related to power  
15         markets, power contract design, long term generation expansion planning,  
16         competitive bidding and contract evaluation. For the past fifteen years, I have been  
17         extensively involved in advising clients on restructuring-related issues, including risk  
18         analysis, risk management, power plant and power contract valuation, and post  
19         transition regulatory issues. In recent years, I also have advised several utilities with  
20         respect to the acquisition of power from third parties. These assignments have  
21         involved the review of power contract offers made by competitive power marketers  
22         and owners of generation assets. I have testified several times with respect to the  
23         prudence of utility planning and power procurement and the economic implications of

1 specific generation investment decisions, primarily in regard to investment in nuclear  
2 facilities. I have performed these assignments as a Senior Vice President with NERA  
3 Economic Consulting (“NERA”) (a position I retired from in November 2014), as a  
4 Principal at Deloitte Consulting, and a Vice President at Energy Management  
5 Associates (“EMA”). Exhibit ETM-1 contains a more detailed statement of my  
6 qualifications.

7

8 **Q. PLEASE BRIEFLY SUMMARIZE YOUR EXPERIENCE AS A**  
9 **CONSULTANT PROVIDING ADVICE AND TESTIMONY RELATED TO**  
10 **THE ECONOMIC ANALYSES OF NUCLEAR INVESTMENTS.**

11 A. In the early 1980s, I advised the owners of the Nine Mile Point 2 nuclear unit on the  
12 economics of continuing with construction of the Nine Mile Point 2 nuclear unit. This  
13 analysis examined the costs and benefits of continuing with construction of the unit  
14 versus abandoning the unit and recovering the investment to date. I testified on the  
15 topic before the New York Public Service Commission. In the same general time  
16 frame, I worked on similar analyses for the owners of the Allen’s Creek and Black  
17 Fox Nuclear plants. In the mid and late 1980s, I analyzed and testified as to the  
18 prudence of the Nine Mile Point 2 nuclear unit and to the prudence of the decision to  
19 complete unit 2 at the South Texas Project nuclear plant. In the 1990s, I directed  
20 projects for the Public Service Company of Colorado examining the potential  
21 retirement of the Maine Yankee nuclear plant and for Niagara Mohawk Power  
22 Company examining the potential retirement of unit 1 at the Nine Mile Point nuclear  
23 facility. I have recently completed for the Ontario Independent Electricity System

1 Operator a Fairness Opinion with respect to a long term (through the early 2060s)  
2 contract for securing the refurbishment and operation of the 6300 MW Bruce nuclear  
3 facility. In September of 2015, I testified on behalf of Entergy Nuclear before the  
4 New York State Department of Environmental Conservation with respect to the  
5 economic consequences of various fish protection measures that would have  
6 mandated significant shut downs for the Indian Point nuclear units.

7

8 **Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE FLORIDA PUBLIC**  
9 **SERVICE COMMISSION (“COMMISSION”)?**

10 A. Yes. In 1987, I testified before the Commission on behalf of the investor-owned and  
11 larger non investor-owned electric utilities in peninsular Florida on the subject of  
12 electric system generation planning and the appropriateness of the model used by  
13 those entities in the context of calculating avoided costs. I also testified on behalf of  
14 the City of Miami in last year’s nuclear cost recovery clause proceeding in Docket  
15 No. 150009-EI.

16

17 **Q. PLEASE PROVIDE AN OVERVIEW OF YOUR TESTIMONY.**

18 A. I have been requested by the City of Miami to review the pleadings, testimony,  
19 deposition testimony, and discovery responses provided in this case with respect to  
20 the annual feasibility analysis of the investment in Turkey Point 6 and 7. Florida  
21 Power & Light Company (“FP&L”) has requested a waiver from providing an  
22 economic feasibility study on the grounds that as it has not decided to petition the  
23 Commission to enter the pre-construction phase and will not do so for at least three to

1 four years pending updating construction costs based on the Vogtle and Summer  
2 nuclear projects, and as such a study would not be of decisional consequence. FP&L  
3 is arguing that past feasibility studies (most notably the 2015 feasibility study) and  
4 potential qualitative benefits justify continued investment in Turkey Point 6 and 7  
5 during the licensing phase and a feasibility study is unnecessary until a decision to  
6 petition the Commission to begin pre-construction is made. My testimony examines  
7 FP&L's position and the underlying support. I conclude that FP&L's logic is flawed  
8 and that as a result of the significant delay in the in-service date associated with  
9 FP&L's decision to wait three to four years before deciding to enter pre-construction  
10 and the staleness of key assumptions underlying the economics, a full feasibility  
11 analysis is required to establish that continued investment during the licensing phase  
12 is prudent. Absent such a feasibility study there is no reasonable basis upon which to  
13 conclude that continued investment in Turkey Point units 6 and 7 is justified.

14

15 **Q. PLEASE DESCRIBE THE INSIGHT THAT THE ANNUAL FEASIBILITY**  
16 **STUDY PROVIDES IN NUCLEAR COST RECOVERY CLAUSE**  
17 **PROCEEDINGS BEFORE THE COMMISSION.**

18 A. The annual economic feasibility study provides the Commission with a quantified  
19 basis on which it can base a decision that continued investment in a major generation  
20 project that qualifies for current rate recovery is justified.

21



1 **Q. WHAT IS THE DIFFERENCE BETWEEN A QUANTITATIVE ECONOMIC**  
2 **FEASIBILITY ANALYSIS AND A QUALITATIVE ECONOMIC**  
3 **FEASIBILITY ANALYSIS?**

4 A. A quantitative feasibility analysis examines the costs of pursuing the investment as  
5 compared to a reasonable alternative and produces quantified information including a  
6 measure of the present value advantage of pursuing the investment, the break even  
7 cost, measures of the year by year rate impact of pursuing the investment versus a  
8 reasonable alternative and measures of items such as fuel usage and emissions. A  
9 qualitative analysis most often fails to directly compare the investment to a specific  
10 reasonable alternative and most often merely cites potential positive aspects of the  
11 investment without any reference to the costs of realizing those positive aspects or  
12 any comparison to alternate means of achieving those aspects.

13  
14 **Q. WOULD A QUALITATIVE ANALYSIS OF THE LONG-TERM**  
15 **FEASIBILITY OF THE TURKEY POINT UNITS 6 & 7 PROJECT PROVIDE**  
16 **A SUFFICIENT BASIS FOR CONTINUED INVESTMENT IN THE TURKEY**  
17 **POINT UNITS 6 & 7 PROJECT?**

18 A. In my opinion such an analysis is not sufficient. While it is obviously true that Turkey  
19 Point 6 and 7 will enhance FP&L's fuel diversity and reduce emissions relative to a  
20 natural gas alternative, merely observing those factors qualitatively provides little to  
21 no useful information as to whether the investment is justified. Without any idea as to  
22 the cost of the project relative to a reasonable alternative or relative to the quantified

1 value of the qualitative benefits, there is no sensible basis on which to evaluate the  
2 desirability of continued investment in a project.

3

4 **Q. IN YOUR OPINION, HAS FP&L SUBMITTED A QUALITATIVE ANALYSIS**  
5 **OF THE LONG-TERM FEASIBILITY OF THE PROJECT THAT HAS**  
6 **PROVIDED A SUFFICIENT BASIS FOR CONTINUED INVESTMENT IN**  
7 **THE TURKEY POINT UNITS 6 & 7 PROJECT?**

8 A. No. The testimony filed by Mr. Scroggs on April 27, 2016 suggests that an economic  
9 feasibility analysis is not needed because there remain qualitative benefits to Turkey  
10 Point Units 6 & 7 project and these benefits in his view obviously outweigh the  
11 amount that FP&L has asked be approved for 2017 expenditures. He concedes, in my  
12 reading, that as a result of continued low gas prices and environmental regulation  
13 uncertainty the base economic outlook for Turkey Point 6 and 7 is uncertain and that  
14 FP&L would not at the current time commit to pursuing construction (or even pre-  
15 construction activities) even if it had all licenses and permits and was in a position to  
16 proceed.

17

18 There is, however, a logical flaw in the argument set forth by Mr. Scroggs. Even if  
19 one accepts that the qualitative benefits of Turkey Point Units 6 and 7 do outweigh  
20 the \$22 million that FP&L is requesting in the current nuclear cost recovery clause  
21 proceeding, it is impossible to conclude that the money is worth spending based on  
22 the relatively small incremental costs that will be incurred in 2017 without having  
23 some idea of the potential overall economic feasibility of the investment. If, for

1 example, it was likely that the investment would provide long term economic  
2 benefits, break even in the long-term, or even come close to breaking even, it is  
3 correct that the qualitative benefits alone may justify the expenditure of the funds  
4 requested for 2017 even absent a commitment to actually construct the plant.  
5 However, if there is a significant deficit in the underlying economics that can be  
6 quantified, it may not be justified to continue expenditures. It is impossible to  
7 determine whether additional funds should be expended without a full economic  
8 feasibility analysis. The potential for long-term economic gains or losses could be  
9 weighed along with qualitative benefits and required incremental expenditures by  
10 examining the long-term economic feasibility analysis. The approach taken by Mr.  
11 Scroggs instead assumes that the long-term economic feasibility is at least break even  
12 and argues for bypassing the economic feasibility study and looking at only a  
13 weighing of qualitative benefits and 2017 expenditures. Absent a full economic  
14 feasibility study, the Commission would be basing a decision to continue funding on  
15 a mere assumption and not on a quantified economic analysis.

16 Further as Mr. Scroggs stated in his May 11, 2016 deposition, the earliest feasible in  
17 service dates for Units 6 and 7 were 2030 and 2031, respectively. That means that on  
18 a present value basis each dollar of benefit realized from the investment in the first  
19 year of its operation will be worth only about 33 cents in current present value. A  
20 quantitative study is needed to put the costs and benefits in perspective as investments  
21 that may seem small today are actually much larger when account is taken that they  
22 will produce no benefits for fifteen years.

1 Q. DO YOU AGREE WITH MR. SCROGGS DEPOSITION TESTIMONY THAT  
2 A QUANTITATIVE FEASIBILITY STUDY WOULD NOT PRODUCE ANY  
3 INFORMATION THAT WOULD BE OF DECISIONAL CONSEQUENCE, AS  
4 FP&L DOES NOT INTEND TO SEEK APPROVAL TO ENTER THE PRE-  
5 CONSTRUCTION PHASE UNTIL THE VOGTLE AND SUMMER NUCLEAR  
6 EXPANSIONS ARE COMPLETE AND THE COSTS OF CONSTRUCTING  
7 TURKEY POINT UNITS 6 AND 7 CAN BE BETTER ESTIMATED?

8 A. No. I have read Mr. Scroggs deposition and I understand that it is his view that as  
9 FP&L will not seek approval to enter pre construction for at least three more years,  
10 there is no point to examining economic feasibility. The obvious flaw in this logic is  
11 that it assumes that the *only* purpose of the economic feasibility study is to decide on  
12 whether to enter pre-construction. It *assumes* but does not demonstrate that all funds  
13 that will be expended in 2017, 2018, 2019 and 2020 are justified by likely economic  
14 benefits. The feasibility study is not in Mr. Scroggs view of decisional consequence  
15 because he has already concluded that the next decision point should not take place  
16 until the Vogtle and Summer are complete and FP&L can develop a realistic estimate  
17 of the costs of constructing Turkey Point Units 6 and 7. This provides the  
18 Commission with absolutely no evidence on which it can conclude that continuing to  
19 expend funds on Turkey Point is economically feasible. It is necessary to conduct a  
20 feasibility study to determine if continuing to expend funds on Turkey Point Units 6  
21 and 7 during the licensing phase is feasible.

22 I understand that Mr. Scroggs in his deposition dismisses the need for such a  
23 determination and in addition to his references to qualitative benefits, justifies such a

1 dismissal based on reference to prior studies including FP&L's 2015 feasibility  
2 analysis. However, earlier studies, including the 2015 study, cannot be relied on.  
3 Even putting aside the skepticism that I have concerning the soundness of the  
4 assumptions underlying that study, there is a major change that needs to be  
5 considered. The in-service dates in that study were 2027 and 2028. The current  
6 earliest in service dates are 2030 and 2031. That change alone requires that an  
7 updated feasibility study be provided as benefits will be delayed by at least three  
8 years. Additionally, the delay further brings in to question some of the assumptions  
9 underlying the 2015 study. For example, the carbon price forecast (a carry-over from  
10 2012), which was a critical factor in viability, was only developed and supported  
11 through 2030. Extrapolations after 2030 were based on undocumented oral  
12 interchanges. As I showed in my 2015 testimony the carbon values were pivotal to  
13 feasibility. With the delay in the in-service dates, reliance on the 2015 feasibility  
14 study is very tenuous as the underlying assumptions for the critical carbon value are  
15 now wholly based on undocumented extrapolations.

16 **Q. IS IT POSSIBLE FOR AN ENTITY OTHER THAN FP&L TO DETERMINE**  
17 **OR EXAMINE THE ECONOMIC FEASIBILITY OF THE TURKEY POINT 6**  
18 **AND 7 PROJECT WITHOUT AN UPDATED FEASIBILITY ANALYSIS**  
19 **FROM FP&L?**

20 A. It is impractical to examine economic feasibility without an analysis from  
21 FP&L. Aside from the massive effort and the difficulty of assembling the data that  
22 FP&L has readily available to conduct the analysis, and developing alternate plans, a  
23 proliferation of economic analyses would not provide the Commission useful

1 economic feasibility information. It would be difficult to identify differences in  
2 feasibility resulting from different study approaches submitted by various parties  
3 using non-uniform information. By having FP&L provide a feasibility analysis, there  
4 is a base from which economic feasibility can be examined and alternate plans  
5 presented that can test conclusions that FP&L may reach without the added confusion  
6 of whether any differences is a result from different study approaches.

7

8 **Q. WHAT WAS THE PURPOSE OF YOUR TESTIMONY IN LAST YEAR'S**  
9 **NUCLEAR COST RECOVERY CLAUSE PROCEEDING IN DOCKET NO.**  
10 **150009-EI?**

11 A. I was asked by the City to examine the evidence and feasibility analysis provided by  
12 FP&L in Docket No. 150009-EI, and the consequences for ratepayers, concerning the  
13 continued development of Turkey Point units 6 and 7. The purpose of my testimony  
14 was to present to the Commission the results of that examination.

15

16 **Q. WHAT EVIDENCE AND INFORMATION DID YOU EXAMINE IN LAST**  
17 **YEAR'S NUCLEAR COST RECOVERY CLAUSE PROCEEDING IN**  
18 **DOCKET NO. 150009-EI?**

19 A. My review of last year's nuclear cost recovery clause proceedings in Docket No.  
20 150009-EI was based on an assessment of FP&L's economic analysis and the  
21 assumptions underlying that analysis. In conducting that review I relied upon  
22 information supplied by FP&L with respect to construction costs, construction  
23 timelines, generation facilities that would be developed absent the construction of

1 Turkey Point and the revenue requirements for such facilities, system production  
2 costs with and without Turkey Point 6 and 7 and system emission costs with and  
3 without Turkey Point 6 and 7.

4

5 **Q. WHAT WERE THE RESULTS OF YOUR EXAMINATION OF THE**  
6 **EVIDENCE AND FEASIBILITY ANALYSIS PROVIDED BY FP&L IN**  
7 **DOCKET NO. 150009-EI?**

8 A. My analysis demonstrated that the economic feasibility of the Turkey Point  
9 investment was not as robust as FP&L claimed that it was. In fact, the economic  
10 feasibility of Turkey Point rested solely on two assumptions that were not well  
11 supported and, at a minimum, strained credulity. The first was an extreme forecast of  
12 carbon values. The forecast was so extreme that by the end of the analysis period,  
13 FP&L's system carbon costs were twice FP&L's system fuel costs. To put it in  
14 perspective, if FP&L was currently incurring fuel costs of 2.5 cents per KWH for gas  
15 –fired generation, it would be paying an additional 5 cents per KWH associated with  
16 the carbon emissions from that generation. Second, FP&L assumed that combined  
17 cycle units developed in lieu of Turkey Point Units 6 and 7 would have to be located  
18 outside of South Florida and would burden the scenarios without Turkey Point Units  
19 6 and 7 with a present value cost of \$1.7 billion. There was no evidence that a  
20 significant effort had been made to identify sites without such a high transmission  
21 cost disadvantage. When the impact of these items was cut in half no scenario was  
22 clearly economic assuming a forty year life. Four of the seven scenarios were  
23 potentially economic, but all were closer to the lower end of the break even range

1 than the higher end and all but one of the potentially economic scenarios were high  
2 fuel costs scenarios. The one medium fuel cost scenario that was potentially  
3 economic had a break even cost of only 2.5% above the bottom end of the break even  
4 range. Even assuming a 60 year life, only one scenario would be clearly economic  
5 and the remaining six 60 year life scenarios examined by FP&L would be only  
6 potentially economic, that is have a break even cost above the top end of the non-  
7 binding costs range.

8

9 **Q. WOULD IT BE PROPER OR SUFFICIENT IN THE CURRENT NUCLEAR**  
10 **COST RECOVERY CLAUSE PROCEEDINGS (DOCKET NO. 160009-EI) TO**  
11 **RELY ON THE FEASIBILITY ANALYSIS THAT FP&L SUBMITTED IN**  
12 **LAST YEAR'S NUCLEAR COST RECOVERY CLAUSE PROCEEDING**  
13 **DOCKET NO. 150009-EI)?**

14 A. No. As Mr. Scroggs deposition testimony indicates this is essentially what FP&L is  
15 doing to justify continued investment during the licensing phase until more  
16 information can be developed with respect to likely construction costs. It is neither  
17 sufficient nor proper for several compelling reasons. First, as previously discussed,  
18 the three to four year delay is a potentially major change to feasibility and needs to be  
19 explicitly examined. Second, with the delay, a pivotal component of value (carbon) is  
20 unsupported by anything other than undocumented oral discussions. Third, FP&L  
21 mischaracterizes the robustness of the 2015 feasibility analysis and as discussed  
22 above when just two key assumptions that appear tenuous are revisited, the 2015  
23 plant feasibility would fall more in the clearly uneconomic/potentially economic



1 category than into the potentially economic/clearly economic category. Fourth, the  
2 reason that FP&L is relying for the pause is a concern over schedule delays and cost  
3 escalation at the two similar projects currently under construction – Vogtle and  
4 Summer. This strongly suggest that the non-binding costs range itself may be low  
5 which further undermines any claim that the 2015 feasibility analysis can be relied on  
6 to justify any further investment in Turkey Point Units 6 and 7. In light of these  
7 factors the 2015 feasibility analysis cannot be relied on to support continued  
8 investment in Turkey Point Units 6 and 7.

9

10 **Q. BASED ON FP&L’S FILINGS AND RESPONSES IN THE CURRENT**  
11 **NUCLEAR COST RECOVERY CLAUSE PROCEEDING (DOCKET NO.**  
12 **160009-ED), ARE THERE ANY SPECIFIC STATEMENTS, CLAIMS, OR**  
13 **EXHIBITS THAT YOU HAVE IDENTIFIED THAT REQUIRE FURTHER**  
14 **ANALYSIS, SPECIFICALLY, A LONG-TERM FEASIBILITY ANALYSIS?**

15 A. Yes. As discussed above FP&L’s claim that the 2015 feasibility analysis shows that  
16 the Turkey Point Units 6 and 7 investment is strongly economic and that, in  
17 combination with potential unquantified qualitative benefits, it supports continued  
18 investment during the licensing phase is incorrect. A new and comprehensive  
19 feasibility study is needed to test this conclusion. Even if the non-binding  
20 construction costs range cannot be updated at this time, the delay in the in-service  
21 dates and staleness of the assumptions with respect to carbon value demand that a  
22 new comprehensive feasibility analysis be conducted. It is well within the bounds of  
23 possibility that such an update would show continued investment to be not justified.

1 **Q. DO YOU BELIEVE THAT THERE SHOULD BE CONTINUED**  
2 **INVESTMENT IN THE TURKEY POINT UNITS 6 AND 7 PROJECT?**

3 A. In my opinion the decision to continue funding investment in the Turkey Point Units  
4 6 and 7 project requires a full blown economic analysis. That analysis can only be  
5 practically provided if FP&L develops and files such an analysis. Absent a long-term  
6 feasibility analysis, there is no method of accurately determining whether continued  
7 investment into the project is prudent and any costs incurred are reasonable. Given  
8 that FP&L plans to pause moving forward with the project until approximately 2020,  
9 that FP&L has estimated that through 2017 it will have spent 1.5% of the high end of  
10 the estimated project cost range of \$20.0 billion, that FP&L does not have a firm date  
11 when it anticipates receiving its combined operating license or its site certification, it  
12 cannot be said that continued investment in Turkey Point Units 6 & 7 is prudent or  
13 that FP&L's continued investment in Turkey Point Units 6 and 7 is reasonable.

14

15 **Q. DOES THIS COMPLETE YOUR TESTIMONY?**

16 A. Yes.

## **EUGENE T. MEEHAN INDEPENDENT CONSULTANT**

Mr. Meehan is an Independent Consultant specializing in regulatory economics and electricity markets, power procurement, electric planning and asset and corporate transaction involving electric marketing, production, transmission and distribution. He has over thirty-five years of experience consulting with electric and gas utilities, regulators and governments and has testified as an expert witness before numerous state and federal regulatory agencies, as well as appeared in federal court and arbitration proceedings.

Mr. Meehan's practice concentrates on serving energy industry clients, with a focus on helping clients manage the transition from regulatory to more competitive environments. He has performed consulting assignments for over fifty large electric, gas, and combination utilities in the areas of retail access, regulatory strategy, strategic planning, financial and economic analysis, merger and acquisition advisory services, power contract analysis, market power and market definition, stranded cost analysis, power pooling, power markets and risk management, ISO and PX development, and costing and pricing. In addition, he has advised numerous utilities on power procurement issues and administered power procurements on behalf of utilities and regulators.

Mr. Meehan has experience leading advisory work on several major restructuring and unbundling assignments. These assignments were multi-year projects that involved integration of regulatory and business strategy, as well as development of regulatory filings associated with the recovery of stranded cost and rate unbundling.

## Education

**Boston College**, BA, Economics, *cum laude*  
**New York University (NYU), Graduate School of Business**, completed core courses for the doctoral program.

## Professional Experience

2015 - **Independent Consultant**

1999-2014 **NERA Economic Consulting**  
Senior Vice President

1996-1999 Vice President

1973-1980 Senior Economic Analyst; Research Assistant

1994-1996 **Deloitte & Touche Consulting Group**  
Principal

1980-1994 **Energy Management Associates, Inc.**  
Vice President

## Areas of Expertise

### *Restructuring/Stranded Cost Recovery*

Mr. Meehan has directed several multi-year projects associated with restructuring and stranded cost recovery. These projects involved facilitating the development of an integrated regulatory and business strategy and formulating regulatory filings to accomplish strategy. As part of these assignments, Mr. Meehan facilitated sessions with senior management to set and track filing strategy. Clients include Public Service Gas & Electric and Baltimore Gas and Electric.

### *Unbundling/Generation Pricing*

Mr. Meehan has formulated unbundling strategies, with a specialization in generation pricing. He has advised several utilities in standard offer pricing and has testified on shopping credits on behalf of First Energy and Baltimore Gas and Electric.

### *Power Procurement*

Mr. Meehan has been involved in power procurement activities for a variety of utilities and regulatory agencies. He has advised utilities in developing and implementing evaluation processes for new generation, with the objective of achieving the best portfolio evaluation. He has helped regulators in Ireland and Canada design and implement portfolio evaluation processes. He has testified before FERC and state regulatory agencies on competitive power procurement. In addition, Mr. Meehan helped to design and implement the New Jersey BGS auction process.

### *Power Contracts*

Mr. Meehan has extensive experience with power contracts and power contract issues. He has reviewed and testified on the three principal types of power contracts: integrated utility to integrated utility contracts, IPP to utility contract, and integrated or wholesale utility to distribution utility contracts. He has testified in power contracts disputes on behalf of Carolina Power and Light, Duke Power Company, Southern Company, Orange and Rockland Utilities, and Tucson Electric Power. He has also advised Oglethorpe Power Corporation in the reform of its wholesale contracts with its distributor cooperative members.

### *Retail and Wholesale Settlements*

In addition to his expertise on power pooling issues, Mr. Meehan has significant experience with assignments related to the settlement process. He has focused on the issues of credit management as new entrants appear in retail and wholesale markets and has designed efficient specifications for retail settlement systems, including the use of load profiling, and examined the risk and cost allocation issues of alternative settlement systems.

### *Risk Management*

Mr. Meehan has advised several large utilities on price risk management. These assignments have included evaluation of price management service offers solicited from power marketers in association with management of assets and entitlements, as well as provision of price managed service for various terms.

### *Marginal Costs*

Mr. Meehan has provided comprehensive marginal cost analyses for over 25 North American Utilities. These assignments required detailed knowledge of utility operations and planning.

### *Power Supply and Transmission Planning*

Mr. Meehan has advised electric utilities on economic evaluations of generation and transmission expansion. He has testified on the economics of particular investments, the prudence of planning processes, and the prudence of particular investment decisions. He has reviewed the economic and rate implications of several large nuclear plants and has testified

before state and federal regulators with respect to nuclear economics and the prudence of nuclear investments.

### *Generation Strategy*

Mr. Meehan has led NERA efforts on a client task force charged with developing an integrated generation asset/power marketing strategy.

### *Power Pooling*

Mr. Meehan has in-depth working knowledge of the operating, accounting, and settlement processes of all United States power pools and representative international power pools. He has provided consulting services for New York Power Pool members on a continuous basis since 1980, advising the Pool and its members on production cost modeling, transmission expansion, competitive bidding and reliability, and marginal generating capacity cost quantification. In NEPOOL, he has quantified the benefits of continued utility membership in the Pool and the impact of the Pool settlement process on marginal cost. He has worked with a major PJM utility to explore the impact of PJM restructuring proposals upon generating asset valuation and examine the implications of alternative restructuring proposals. He has consulted for Central and Southwest Corporation, Entergy, and Southern Company on issues that involved the internal pooling arrangements of the utility operating companies of those holding companies, as well as for various utilities on the impact of pooling arrangements on strategic alternatives.

## **Representative Assignments**

Worked with Public Service Electric & Gas Company (PSE&G) to direct a three year NERA advisory effort on restructuring. Facilitated a two-day senior management meeting to set regulatory strategy in 1997. Throughout 1997 and 1998, worked over half time at PSE&G to help implement that strategy and advised on testimony preparation, cross-examination, and briefing. Also advised PSE&G on business issues related to securitization, energy settlement and credit requirements for third party suppliers. During 1999, advised PSE&G during settlement negotiations and litigation of the settlement. PSE&G achieved a restructuring outcome that involved continued ownership of generation by an affiliate and the securitization of \$2.5 billion in stranded costs.

Testified for the City of Miami on the issue of economic viability in connection with the City's intervention in Florida Power and Light's 2015 annual assessment of the Turkey Point 6 and 7 nuclear development project.

Worked on separate assignments for a large utility in the Northeast and a large utility in the Southeast, advising on the evaluation of risk management offers from power marketers. The assignments included reviewing proposals, attending interviews with marketers and providing advice on these, and the developing analytical software to evaluate offers.

Worked with government of Ontario beginning in 2004 to help design the RFP and economic evaluation process for the solicitation of 2500 Mw of new generating capacity. Supervising NERA's portfolio-based economic evaluation on behalf of the Ontario Ministry of Energy.

Testified on behalf of Pacific Gas & Electric Company before the FERC in a case benchmarking the PSA between the distribution utility and a soon-to-be-created generating company. This effort involved developing detailed expertise in applying the Edgar standard and a detailed review of DWR procurement during the western power crisis. In addition, this effort involved the review of more than 100 power contracts in the WECC.

Directed NERA's efforts, on behalf of the electricity regulator in Ireland, to design an RFP and implementation process for the purchase of 500 Mw of new generating capacity in 2003. NERA advised on the RFP, the portfolio evaluation method, and the power contract and also conducted the economic evaluation.

Reviewed the economic evaluation conducted by Southern Company Service for affiliated operating companies in connection with an RFP for over 2000 Mw of new generating capacity. Submitted testimony before FERC on behalf of Southern Company Service.

Worked with Baltimore Gas and Electric (BG&E) to conduct a one and one-half year consulting assignment that involved providing restructuring advice. The project began in March/April 1998 with senior management discussions and workshops on plan development and filing strategy. Advised BG&E in the development of testimony, rebuttal testimony, and public information dissemination. Worked to review and coordinate testimony from all witnesses and offered testimony on shopping credits and in defense of the case settlement. BG&E achieved a restructuring outcome enabling it to retain generation ownership. As part of this assignment, advised BG&E on generation valuation and unregulated generation business strategy.

Directed the efforts of a large Southeastern utility to develop a short-term power contract portfolio and to evaluate the relative value of power options, forwards, and unit contracts to determine the optimal mix of instruments to manage price risk.

Testified for XCEL Energy on the use of competitive bids for new generation needs. Examined whether XCEL was prudent not to explore a self-build plan and the reasonableness of relying on ten-year or shorter contracts as opposed to life-of-facility contracts, in order to meet needs and facilitate a possible future transition to competition. This project addressed the comparability of fixed bids to rate base plant additions.

Advised and testified on behalf of First Energy in the Ohio restructuring proceeding on the issues of generation unbundling and stranded cost. Defended the First Energy shopping credit proposal.

Advised Consolidated Edison and Northeast Utilities on merger issues and testified in Connecticut and New Hampshire merger proceedings. Testimony focused on retail competition in gas and electric commodity markets.

Directed NERA's effort to train selected representatives of a major European power company in American power marketing and risk management practices. The project involved numerous meetings and interviews with power marketing firms.

Led NERA's effort to advise the New England ISO on the development of an RTO filing. Examined performance-based ratemaking for transmission and market operator functions.

Examined ERCOT power market conditions during the period of time from 1997 to 1999 and testified on behalf of Texas New Mexico Power Company for the prudence of its power purchase activity.

Advised a Midwestern utility on restructuring of a wholesale contract with an affiliate. Involved forecasting of the unbundled wholesale cost-of-service and market prices, as well as development of a regulatory strategy for gaining approval of contract restructuring and the transfer of generation from regulated to EWG states.

Performed market price forecasts for numerous utility clients. These forecasts have employed both traditional modeling and newly developed statistical approaches.

Examined the credit issues associated with the entry of new entities into retail and wholesale settlement market. These assignments involved a review of current Pool credit procedures, examination of commodity and security trading credit requirements, coordination with financial institutions, and recommendations concerning credit exposure monitoring, credit evaluation processes, and credit requirements.

Oversight of EMA's consulting and software team in designing and implementing the LOLP capacity payment, a portion of the UK wholesale settlement system.

Advised Oglethorpe Power Corporation in the reform of its contracts with its distribution cooperative members and the evolution of full requirement power wholesale power contracts into contracts that preserve Oglethorpe's financial integrity and are suitable for a competitive environment.

Developed long run marginal and avoided costs of natural gas service, as well as avoided cost methods and procedures. These costs have been used primarily for the analysis of gas DSM opportunities. Clients include Consolidated Edison Company, Southern California Edison Company, Niagara Mohawk Power Corporation, and Elizabethtown Gas Company.

## **Review of power contracts and testimony in numerous power contract disputes**

Development of long run avoided costs of electricity service and avoided cost methods and procedures. These costs have been used to assess DSM and cogeneration, as well as to develop integrated resource plans. Clients include Public Service Company of Oklahoma, Central Maine Power Company, Duquesne Light Company, and the New York investor-owned utilities.



Advised Central Maine Power Company (CMP) on the development of a competitive bidding framework. This framework was implemented in 1984 and was the first of its kind in the nation. CMP adopted the framework outlined in EMA's report and won prompt regulatory approval.

Advised a utility in the development of an incentive ratemaking plan for a new nuclear facility. This assignment involved strategic analysis of alternate proposals and quantification of the financial impact of various ratemaking alternatives. Presented strategic and financial results in order to convince senior management to initiate negotiations for the incentive plan.

Advised and testified on behalf of the New York Power Pool utilities on the methodology for measuring pool marginal capacity costs. This work included development of the methodology and implementation of the system for quantifying LOLP-based marginal capacity costs.

Provided testimony on behalf of the investor-owned electric utilities in New York State, concerning the proper methodology to use when analyzing the cost-effectiveness of conservation programs. This methodology was adopted by the Commission and used as the basis for DSM evaluation in New York from 1982 through 1988.

Developed the functional design of a retail access settlement system and business processes for a major PJM combination utility. This design is being used to construct a software system and develop business procedures that will be used for retail settlements beginning January 1999.

Reviewed the power pool operating and interchange accounting procedure of the New York Power Pool, the Pennsylvania, New Jersey, Maryland Interconnection, Allegheny Power System, Southern Company, and the New England Power Pool as part of various consulting assignments and in connection with the development of production simulation software.

Summarized and analyzed the operational NEPOOL to examine the feasibility of incorporating NEPOOL interchange impacts with Central Maine and accounting procedure of the New England Power Pool Power Company's buy-back tariffs.

Developed and presented a two-day seminar delivered to electric industry participants in the UK (prior to privatization), outlining the structure and operation of power pools and bulk power market transactions in North America.

Benchmark analysis and FERC testimony of PGE's proposed twelve-year contract between PG&E and Electric Gen LLC (contract value in excess of \$15 billion).

Responsible for NERA's overall efforts in advising New Jersey's Electric Distribution Companies on the structuring and conduct of the Basic Generation Service auctions (the 2002 auction involved \$3.5 billion, and the 2003 and 2004 auctions involved over \$4.0 billion).

## **Publications, Speeches, Presentations, and Reports**

*Capacity Adequacy in New Zealand's Electricity Market*, published in *Asian Power*, September 18, 2003

Central Resource Adequacy Markets For PJM, NY-ISO AND NE-ISO, a report written February 2004

*Ex Ante or Ex Post? Risk, Hedging and Prudence in the Restructured Power Business*, The Electricity Journal, April 2006

*Distributed Resources: Incentives*, a white paper prepared for Edison Electric Institute, May 2006

*Restructuring Expectations and Outcomes*, a presentation presented at the Saul Ewing Annual Utility Conference: The Post Rate Cap and 2007 State Regulatory Environment, Philadelphia, PA, May 21, 2007

*Making a Business of Energy Efficiency: Sustainable Business Models for Utilities*, prepared for Edison Electric Institute, August 2007

*Perspectives on Ownership Issues for Traditional Generating & Alternative Resources: Should we allow utilities back in the market or limit ownership to merchants?* A presentation presented at the Energy in the Northeast Conference sponsored by Law Seminars Intl., October 18, 2007

*Restructuring at a Crossroads, presented at Empowering Consumers Through Competitive Markets: The Choice Is Yours*, Sponsored by COMPETE and the Electric Power Supply Association, Washington, DC, November 5, 2007

*Competitive Electricity Markets: The Benefits for Customers and the Environment*, a white paper prepared for COMPETE Collation, February 2008

*The Continuing Rationale for Full and Timely Recovery of Fuel Price Levels in Fuel Adjustment Clauses*, The Electricity Journal, July 2008

*Impact of EU Electricity Competition Directives on Nuclear Financing* presented to: SMI – Financing Nuclear Power Conference, London, UK, May 20, 2009

*Using History As A Guide*, a presentation presented at the Electric Power Research Institute (EPRI) Conference: Electricity Pricing Structures for the 21st Century, July 14 – 15, 2011, Nashville, TN

## **Testimony**

### ***Forums***

Arkansas Public Service Commission

Federal Energy Regulatory Commission

Florida Public Service Commission

Maine Public Utilities Commission  
Minnesota Public Service Commission  
Nevada Public Service Commission  
New York Public Service Commission  
Nuclear Regulatory Commission – Atomic Safety and Licensing Board  
Oklahoma Public Service Commission  
Public Service Commission of Indiana  
Public Utilities Commission of Ohio  
Public Utilities Commission of Nevada  
Public Utilities Commission of Texas  
Public Utilities Commission of New Hampshire  
United States District Court  
United States Senate Committee on Energy and Natural Resources  
Various arbitration proceedings

***Clients***

American Electric Power Company  
Arkansas Power & Light Company  
Baltimore Gas & Electric  
Carolina Power & Light Company  
Central Maine Power  
Consolidated Edison Company of New York, Inc.  
Dayton Power and Light Company  
Florida Coordinating Group  
Houston Lighting & Power Company

Minnesota Power and Light Company

Nevada Power Company

Niagara Mohawk Power Corporation

Northern Indiana Public Service Company

Oglethorpe Power Corporation

Pacific Gas and Electric Company

Power Authority of the State of New York

Public Service and Electric Company

Public Service Company of Oklahoma

Sierra Pacific Power Company

Southern Company Services, Inc.

Tucson Electric Power Company

Texas-New Mexico Power Company

***Recent Expert Testimony and Expert Reports***

Supplemental Testimony on behalf of Texas-New Mexico Power Company, Docket No. 15660, September 5, 1996.

Direct Testimony on behalf of Long Island Lighting Company before the Federal Energy Regulatory Commission, September 29, 1997.

Rebuttal Testimony on behalf of Texas-New Mexico Power Company, SOAH Docket No. 473-97-1561, PUC Docket No. 17751, March 2, 1998.

Prepared Testimony and deposition testimony on behalf of Central Maine Power Company, United States District Court Southern District of New York, 98-civ-8162 (JSM), March 5, 1999.

Prepared Direct Testimony Before the Public Service Commission of Maryland on behalf of Baltimore Gas & Electric Company, PSC Case Nos. 8794/8804, June 1999.

Rebuttal Testimony Before the Maryland Public Service Commission, on behalf of Baltimore Gas & Electric Company, PSC Case Nos. 8794/8804, March 22, 1999.

NORCON Power Partners LP v. Niagara Mohawk Energy Marketing, before the United States District Court, Southern District of New York, June 1999.

Prepared Supplemental Testimony Before the Maryland Public Service Commission, on behalf of Baltimore Gas & Electric Company, PSC Case Nos. 8794/8804, July 23, 1999.

Prepared Supplemental Reply Testimony Before the Maryland Public Service Commission, on behalf of Baltimore Gas & Electric Company, PSC Case Nos. 8794/8804, August 3, 1999.

Direct Testimony on behalf of Niagara Mohawk, Before the New York State Public Service Commission, PSC Case No. 99-E-0681, September 3, 1999.

Rebuttal Testimony on behalf of Niagara Mohawk, PSC Case No. 99-E-0681 Before the New York State Public Service Commission, November 10, 1999.

Arbitration deposition on behalf of Oglethorpe Power Corporation, last quarter of 1999.

Direct Testimony Before the Public Utilities Commission of Ohio on behalf of FirstEnergy Corporation, Ohio Edison Company, The Cleveland Electric Illuminating Company and The Toledo Edison Company, Case No. 99-1212-EL-ETP re: Shopping Credits.

Direct Testimony on behalf of Niagara Mohawk, Before the New York State Public Service Commission, PSC Case No. 99-E-0990, February 25, 2000.

Testimony on behalf of Consolidated Edison Company of New York, Inc., State of Connecticut, Department of Public Utility Control, Docket No.: 00-01-11, April 28, 2000 and June 30, 2000.

Testimony on behalf of Texas-New Mexico Power Company, Fuel Reconciliation Proceeding before the Texas PUC, June 30, 2000.

Testimony on behalf of Consolidated Edison Company of New York, Inc., Before the New Hampshire Public Service Commission, Docket No.: DE 00-009, June 30, 2000.

Rebuttal Testimony Before the Public Utilities Commission of the State of Colorado, Docket No. 99A-549E, November 22, 2000.

Testimony Before the Public Utilities Commission of the State of Colorado, Docket No. 99A-549E, January 19, 2001.

DETM Management, Inc. Duke Energy Services Canada Ltd., And DTMSI Management Ltd., Claimants vs. Mobil Natural Gas Inc., And Mobil Canada Products, Ltd., Respondents. American Arbitration Association Cause No. 50 T 198 00485 00, August 27, 2001.

State of New Jersey Board of Public Utilities, In the Matter of the Provision of Basic Generation Service Pursuant to the Electric Discount and Energy Competition Act of 1999, Before President Connie O. Hughes, Commissioner Carol Murphy on Behalf of the Electric Distribution

Companies (Public Service Electric and Gas Company, GPU Energy, Consolidate Edison Company and Conectiv) Docket No.: EX01050303, October 4, 2001.

Direct Testimony Before the Federal Energy Regulatory Commission on behalf of Pacific Gas and Electric Company, Docket No.: ER02-456-000, November 30, 2001.

Fourth Branch Associates/Mechanicville vs. Niagara Mohawk Power Corporation, January 2002 (Expert Report).

Arbitration Deposition on behalf of Oglethorpe Power Corporation, March 2002.

Direct Testimony and Deposition Testimony Before the Federal Energy Regulatory Commission on behalf of Electric Generation LLC in Response to June 12 Commission Order, Docket No.: ER02-456-000, July 16, 2002.

Rebuttal Testimony Before the Federal Energy Regulatory Commission on behalf of Electric Generation LLC in Response to June 12 Commission Order, Docket No.: ER02-456-000, August 13, 2002.

Direct Testimony Before the Public Utilities Commission of Nevada on behalf of Nevada Power Company, in the matter of the Application of Nevada Power Company to Reduce Fuel and Purchased Power Rates, PUCN Docket No. 02-11021, November 8, 2002 and subsequent Deposition Testimony.

Direct Testimony Before the Public Utilities Commission of Nevada on behalf of Sierra Pacific Power Company's Deferred Energy Case, Docket No. 03-1014, January 10, 2003.

Direct Testimony Before the Public Utility Commission Of Texas on behalf of Texas-New Mexico Power Company, Application Of Texas-New Mexico Power Company For Reconciliation Of Fuel Costs, April 1, 2003.

Rebuttal Testimony Before the Public Utilities Commission of Nevada on behalf of Nevada Power Company, PUCN Docket No. 02-11021, April 1, 2003.

Rebuttal Testimony Before the Public Utilities Commission of Nevada on behalf of Sierra Pacific Power Company, Docket No. 03-1014, May 5, 2003.

Testimony Before the Public Service Commission of New York on behalf of Consolidated Edison Company of New York, Inc., Case No.: 00-E-0612, September 19, 2003.

State of New Jersey Board of Public Utilities, In the Matter of the Provision of Basic Generation Service Pursuant to the Electric Discount and Energy Competition Act of 1999, Before President Connie O. Hughes, Commissioner Carol Murphy on Behalf of the Electric Distribution Companies (Public Service Electric and Gas Company, GPU Energy, Consolidate Edison Company and Conectiv), September 2003.

Direct Testimony Before the Public Utilities Commission of Nevada on behalf of Nevada Power Company's Deferred Energy Case, November 12, 2003.

Direct Testimony Before the Public Utilities Commission of Nevada on behalf of Sierra Pacific Power Company's Deferred Energy Case, January 12, 2004.

Rebuttal Testimony Before the Public Utilities Commission of Nevada on behalf of Sierra Pacific Power Company's Deferred Energy Case, May 28, 2004.

Direct Testimony on behalf of Texas-New Mexico Power Company, First Choice Power Inc. and Texas Generating Company LP to Finalize Stranded Cost under PURA § 39.262, January 22, 2004.

Rebuttal Testimony on behalf of Texas-New Mexico Power Company, First Choice Power Inc. and Texas Generating Company LP to Finalize Stranded Cost under PURA § 39.262, April, 2004.

State of New Jersey Board of Public Utilities, In the Matter of the Provision of Basic Generation Service Pursuant to the Electric Discount and Energy Competition Act of 1999, Before President Connie O. Hughes, Commissioner Carol Murphy on Behalf of the Electric Distribution Companies (Public Service Electric and Gas Company, GPU Energy, Consolidate Edison Company and Conectiv), September 2004.

Direct Testimony Before the Public Utilities Commission of Nevada on behalf of Nevada Power Company's Deferred Energy Case, November 9, 2004.

Direct Testimony Before the Public Utilities Commission of Nevada on behalf of Sierra Pacific Power Company's Deferred Energy Case, January 7, 2005.

Expert Report on behalf of Oglethorpe Power Corporation, March 23, 2005.

Arbitration deposition on behalf of Oglethorpe Power Corporation, April 1, 2005.

Direct Testimony Before the Public Utilities Commission of Nevada on behalf of Sierra Pacific Power Company's December 2005 Deferred Energy Case.

Direct Testimony Before the Public Utilities Commission of Nevada on behalf of Nevada Power Company's 2006 Deferred Energy Case, January 13, 2006.

Remand Rebuttal for Public Service Company of Oklahoma before the Corporation Commission of the State of Oklahoma, Cause No. PUD 200200038, **Confidential**, March 17, 2006

Answer Testimony on behalf of the Colorado Independent energy Association, AES Corporation and LS Power Associates, LP, Docket No. 05A-543E, April 18, 2006.

Cross-Answer Testimony on behalf of the Colorado Independent energy Association, AES Corporation and LS Power Associates, LP, Docket No. 05A-543E, May 22, 2006.

Rebuttal Testimony Before the Public Utilities Commission of Nevada on behalf of Nevada Power Company's 2006 Deferred Energy Case, Docket No. 06-01016, June 2006.

Direct Testimony Before the Public Utilities Commission of Nevada on behalf of Sierra Pacific Power Company's Deferred Energy Case, December 2006.

Direct Testimony Before the Public Utilities Commission of Nevada on behalf of Sierra Pacific Power Company's Application for Recovery of Costs of Achieving Final Resolution of Claims Associated with Contracts Executed During the Western Energy Crisis, December 2006.

Direct Testimony Before the Public Utilities Commission of Nevada on behalf of Nevada Power Company's Application for Recovery of Costs of Achieving Final Resolution of Claims Associated with Contracts Executed During the Western Energy Crisis, December 2006.

Direct Testimony Before the Public Utilities Commission of the State of Hawaii, on behalf of Hawaiian Electric Company, Inc., Docket No. 2006-0386, December 22, 2006.

Direct Testimony Before the Public Utilities Commission of the State of Hawaii, on behalf of Hawaiian Electric Company, Inc., Docket No. 05-0315, December 29, 2006.

Rebuttal Testimony Before the Public Utilities Commission of Nevada on behalf of Nevada Power Company's 2007 Deferred Energy Case, January 2007.

Declaration Before the State of New York Public Service Commission, on behalf of Consolidated Edison Company of New York, Inc.'s Long Island City Electric Network, Case 06-E-0894 – Proceeding on Motion of the Commission to Investigate the Electric Power Outage and Case 06-E-1158 – In the Matter of Staff's Investigation of Consolidated Edison Company of New York, Inc.'s Performance During and Following the July and September Electric Utility Outages. July 24, 2007.

Direct Testimony Before The Public Utilities Commission of Colorado, In The Matter of the Application of Public Service Company of Colorado for Approval of its 2007 Colorado Resource Plan, April 2008.

Answer Testimony Before the Public Utilities Commission of the State of Colorado on behalf of Trans-Elect Development Company, LLC, and The Wyoming Infrastructure Authority, Docket No. 07A-447E, April 28, 2008.

Rebuttal Testimony Before the Public Utilities Commission of Nevada, Application of Sierra Pacific Power Company d/b/a/ NV Energy Seeking Acceptance of its Eight Amendment to its 2008-2007 Integrated Resource Plan, Docket No. 10-02023.

Direct Testimony Before the Public Utilities Commission of Nevada on behalf of Sierra Pacific Power Company's 2008 Deferred Energy Case, February 2009.

Direct Testimony Before the Public Utilities Commission of Nevada on behalf of Nevada Power Company's 2008 Deferred Energy Case, February 2009.



Direct Testimony Before the Public Utilities Commission of Texas, on behalf of Entergy Texas, Inc. Docket No. 33687, April 29, 2009.

Direct Testimony Before The Public Utilities Commission Of Nevada On Behalf of Nevada Power Company D/B/A Nevada Energy, 2010 – 2029 Integrated Resource Plan, June 26, 2009.

Before the Public Service Commission of New York, Case 09-E-0428 Consolidated Edison Company of New York, Inc. Rate Case, Rebuttal Testimony, September 2009.

Direct Testimony Before the Public Utilities Commission of Nevada on Behalf of Sierra Pacific Power Company's 2009 Deferred Energy Case, February 2010.

Direct Testimony Before the Public Utilities Commission of Nevada on behalf of Nevada Power Company's 2009 Deferred Energy Case, February 2010.

Direct Testimony Before the Public Utilities Commission of Nevada on behalf of Nevada Power Company's 2010 – 2029 Integrated Resource Plan, Docket No. 09-07003, July 2010.

Direct Testimony Before the Public Utilities Commission of Nevada on behalf of Sierra Pacific Power Company's Eighth Amendment to its 2008 – 2027 Integrated Resource Plan, Docket No. 10-03023, July 2010.

Rebuttal Testimony Before the Public Utilities Commission of Nevada, Application of Nevada power Company d/b/a NV Energy Seeking Acceptance of its Triennial Integrated Resource Plan covering the period 2010-2029, including authority to proceed with the permitting and construction of the ON Line transmission project, Docket No. 10-02009.

Rebuttal Testimony Before the Public Utilities Commission of Nevada, Petition of Nevada Power Company d/b/a NV Energy requesting a determination under NRS 704.7821 that the terms and conditions of five renewable power purchase agreements are just and reasonable and allowing limited deviation from the requirements of NAC 704.8885, Docket No. 10-03022.

Rebuttal Testimony Before the Public Utilities Commission of Nevada, on behalf of Nevada Power Company d/b/a NV Energy, 2010 Deferred Energy Case, Docket No. 10-03003, filed August 3, 2010

Rebuttal Testimony Before the Public Utilities Commission of Nevada, on behalf of Sierra Pacific Power Company d/b/a NV Energy Electric Department, 2010 Deferred Energy Case, Docket No. 10-03004, filed August 3, 2010

Direct Testimony Before the Public Utilities Commission of Nevada, on behalf of Sierra Pacific Power Company, d/b/a NV Energy, Docket No. 11-03 \_\_ 2011 Electric Deferred Energy Proceeding, February 2011.

Direct Testimony Before the Public Utilities Commission of Nevada, on behalf of Nevada Power Company, d/b/a NV Energy, Docket No. 11-03 \_\_ 2011 Electric Deferred Energy Proceeding, February 2011.

Testimony Before the Atomic Safety and Licensing Board, Nuclear Regulatory Commission, In the Matter of Entergy Nuclear Operations, Inc., Dockets Nos. 50-247-LR and 50-286-LR, March 30, 2012.

Rebuttal Testimony Before the Public Utilities Commission of Ohio, In Support of AEP Ohio's Modified Electric Security Plan, Case No. 10-2929, May 11, 2012.

Prefiled Direct Testimony Before the Public Utilities Commission of Nevada, on behalf of Sierra Pacific Power Company, d/b/a NV Energy, Docket No. 12-03 \_\_ 2012 Electric Deferred Energy Proceeding, February 2012.

Prefiled Direct Testimony Before the Public Utilities Commission of Nevada, on behalf of Nevada Power Company, d/b/a NV Energy, Docket No. 12-03 \_\_ 2012 Electric Deferred Energy Proceeding, February 2012.

Direct Testimony Before the Public Utilities Commission of Nevada, on behalf of Sierra Pacific Power Company, d/b/a NV Energy, Docket No. 13-03 \_\_ 2013 Electric Deferred Energy Proceeding, February 2013.

Direct Testimony Before the Public Utilities Commission of Nevada, on behalf of Nevada Power Company, d/b/a NV Energy, Docket No. 13-03 \_\_ 2013 Electric Deferred Energy Proceeding, February 2013.

Direct Testimony Before the Public Utilities Commission of Nevada, on behalf of Sierra Pacific Power Company, d/b/a NV Energy, Docket No. 14-02 \_\_ 2014 Electric Deferred Energy Proceeding, February 2014.

Direct Testimony Before the Public Utilities Commission of Nevada, on behalf of Nevada Power Company, d/b/a NV Energy, Docket No. 14-02 \_\_ 2014 Electric Deferred Energy Proceeding, February 2014.